

03050203-050
(Bull Swamp Creek)

General Description

Watershed 03050203-050 is located in Lexington, Orangeburg, and Calhoun Counties and consists primarily of *Bull Swamp Creek* and its tributaries. The watershed occupies 62,118 acres of the Sandhills and Upper Coastal Plain regions of South Carolina. The predominant soil types consist of an association of the Fuquay-Dothan-Lakeland-Vaughn series. The erodibility of the soil (K) averages 0.14; the slope of the terrain averages 8%, with a range of 0-25%. Land use/land cover in the watershed includes: 1.21% urban land, 23.79% agricultural land, 8.87% scrub/shrub land, 0.91% barren land, 57.18% forested land, 7.50% forested wetland (swamp), and 0.54% water.

Bull Swamp Creek originates near the Town of Gaston and flows through the Town of Swansea before draining into the North Fork Edisto River. Bull Swamp Creek flows through Spires Pond before accepting drainage from Boggy Branch, Fourth Creek, Third Creek (Redmond Pond), Cow Branch, Gardner Branch, and Little Bull Swamp Creek (Cowpen Swamp, Turkey Branch). Bull Swamp Creek then flows through Etheridge Mill Pond (100 acres) and into the North Fork Edisto River. There are a total of 61.9 stream miles in this watershed, all classified FW.

Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
E-591	BIO	FW	BULL SWAMP CREEK AT SC 6
E-034	S	FW	BULL SWAMP CREEK AT CULVERT, 1.1 MI NW OF SWANSEA
E-035	S	FW	BULL SWAMP CREEK AT US 321, 0.9 MI S OF SWANSEA
E-042	W/BIO	FW	BULL SWAMP CREEK AT S-38-189

Bull Swamp Creek - There are four monitoring sites along Bull Swamp Creek, which was Class B until April, 1992. At the furthest upstream site (E-591), aquatic life uses are partially supported based on macroinvertebrate community data. At the next site downstream (E-034), aquatic life uses are not supported due to dissolved oxygen excursions, compounded by significant increasing trends in pH and turbidity. This is a secondary monitoring station and sampling is intentionally biased towards periods with the potential for low dissolved oxygen concentrations. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in total phosphorus suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Further downstream (E-035), aquatic life uses are fully supported, but there is a significant increasing trend in turbidity. This is a secondary monitoring station and sampling is intentionally biased towards periods with the potential for low dissolved oxygen concentrations. P,P'DDT was detected in the 1993 and 1995 sediment samples. Although the use of DDT was banned in 1973, it is very persistent in the environment. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in total phosphorus suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions. At the furthest downstream site (E-042), aquatic life uses are fully supported based on macroinvertebrate community data. All sites are part of a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although pH excursions were noted, they were typical of values seen in such systems. Recreational uses are fully supported at this site.

A fish consumption advisory has been issued by the Department for mercury and includes the streams within this watershed (see advisory p.31).

Permitted Activities

Point Source Contributions

RECEIVING STREAM	NPDES#
FACILITY NAME	TYPE
PERMITTED FLOW @ PIPE (MGD)	LIMITATION
COMMENT	
BULL SWAMP CREEK	SC0023205
TOWN OF SWANSEA	MINOR MUNICIPAL
PIPE #: 001 FLOW: 0.160	WATER QUALITY
WETLAND; WQL FOR NH3-N, TRC	
BOGGY BRANCH	SC0034541
GASTON COPPER RECYCLING PLT	MINOR INDUSTRIAL
PIPE #: 001 FLOW: 1.0	WATER QUALITY

Growth Potential

There is a low potential for growth in this watershed. The construction of a sewer line from the Town of Swansea to the City of Cayce WWTP may provide growth to the area.